1984

Computation of premium deficiencies in insurance enterprises; Issues paper (1984 March 26)

American Institute of Certified Public Accountants. Insurance Companies Committee

FILE 3100

MARCH 26, 1984

ISSUES PAPER

COMPUTATION OF PREMIUM DEFICIENCIES IN INSURANCE ENTERPRISES

PREPARED BY

INSURANCE COMPANIES COMMITTEE

AUDITING STANDARDS DIVISION

AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS

830408

AICPA

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March 30, 1984

J. T. Ball, CPA
Financial Accounting Standards Board
High Ridge Park
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Stamford, CT 06905

Dear J. T.:

Enclosed for the FASB's consideration is an issues paper, "Computation of Premium Deficiencies in Insurance Enterprises," prepared by the AICPA Insurance Companies Committee and approved by the Accounting Standards Executive Committee (AcSEC).

The advisory conclusions of the Insurance Companies Committee, with which AcSEC agreed, are presented in paragraphs 21, 25, and 50 through 55. These are AcSEC's votes on the issues:

- Para. 21 - The time value of money should be considered in the computation of premium deficiencies. (15 yes, 0 no)

- Para. 25 - Expected investment income should not be recorded to offset current underwriting losses. (15 yes, 0 no)

- Para. 50 - Premium deficiencies should be calculated using a future investment income approach. (14 yes, 1 no)

- Para. 51 - Future investment income is earnings expected from investment of the net cash available from premiums in force. (15 yes, 0 no)

- Para. 52 - The rate used to estimate future investment income should be the expected portfolio rate. (14 yes, 0 no, 1 absent)

- Para. 53 - The total amount of expected investment income used in the determination of premium deficiencies should be reduced

properly if the recorded invested assets plus expected future income is less than total liabilities. (13 yes, 0 no, 1 absent, 1 abstain)

- Para. 54 - If premium deficiency calculations are being made for a group of policies whose claim liabilities are presented at discounted amounts, the discount should be added back to the liability before performing the calculation. (13 yes, 0 no, 1 absent, 1 abstain)

- Para. 55 - Other aspects of premium deficiency determinations specified in FASB 60 should remain applicable. (14 yes, 0 no, 1 absent)

AcSEC recommends that the FASB undertake to provide guidance on the determination of premium deficiencies by insurance enterprises. The advisory conclusions of this issues paper would require a modification of the definition; of a premium deficiency for short-duration contracts in paragraph 33 of FASB Statement No. 60, Accounting and Reporting by Insurance Enterprises. (See also the related disclosure requirement in paragraph 60e of that Statement.) The advisory conclusions also provide guidance on the factors to be considered in calculating premium deficiencies. We recommend that the guidance be issued by the FASB in an appropriate form under the Board's current policies.

Representatives of the Accounting Standards Division and of the Insurance Companies Committee are available to discuss the issues in this paper with the members of the Board or its staff at your convenience. We would appreciate being kept informed of the Board's action on this paper.

Sincerely,

Roger Cason

Roger Cason
Chairman
Accounting Standards
Executive Committee

Frank A. Bruni

Frank A. Bruni
Chairman
Insurance Companies
Committee

RC/FB:rf
Enclosure

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Introduction

1. The AICPA Insurance Companies Committee is in the process of revising the AICPA industry audit guide, Audits of Fire and Casualty Insurance Companies ("audit guide"). As part of the revision process, the committee identified several accounting issues that were not discussed in the audit guide or where existing practice varies. All but two of the issues were resolved in SOP 78-6, Accounting for Property and Liability Insurance Companies ("SOP"). The two issues not resolved were (a) whether claims should be discounted (recorded at present value) and (b) whether expected investment income (time value of money) should be considered in the computation of premium deficiencies. The SOP states that because of the importance of the issues, they will be addressed in a separate statement of position (or issues paper). Statement of Financial Accounting Standards No. 60, Accounting and Reporting by Insurance Enterprises (FAS 60), which extracted the principles and practices from the audit guide and the SOP, likewise did not address those issues. This issues paper addresses the question of whether the time value of money should be considered in the computation of premium deficiencies. The time value of money is the economic effects to the insurance enterprise of the time that elapses between the collection of premiums and the payment of claims and expenses considered either by estimating expected investment income or by discounting to present value future claim payments and expenses.

2. The interests of policyholders and the public in the financial integrity of insurance companies makes it important that the solvency of these companies be continuously demonstrated to regulatory authorities. Consideration of these interests, together with the uncertainties inherent in the future, has resulted in the conservative accounting practices prescribed or permitted by insurance regulatory authorities ("statutory accounting practices"). Federal income taxation of insurance companies is also based primarily on statutory accounting practices. The discussions and advisory conclusions in this issues paper relate to generally accepted accounting principles. This paper does not address accounting practices for purposes of reporting to regulatory or taxing authorities.

Definitions

3. The following definitions are used in this issues paper:

- Acquisition Costs - Costs that vary with and are primarily related to the acquisition of insurance contracts (for example, agent and broker commissions, certain underwriting and policy issue costs, and medical and inspection fees).

- Claim (Loss) - A demand for payment of a policy benefit because of the occurrence of an insured event such as death, injury, destruction or damage.

- Claim Adjustment Expenses (Loss Adjustment Expenses) - Expenses incurred or to be incurred in the course of investigating and settling claims. Adjustment expenses include any legal and adjusters' fees, and the costs of paying claims and all related expenses.

- Discounting - Recording future claim payments and expenses at their present value.

- Expected Claims - Claims expected to occur subsequent to a particular date (ordinarily, the balance sheet date) until expiration of the policies in force (unexpired portion of the policies).

- Expected Claim Adjustment Expenses - Claim adjustment expenses to be incurred in the course of investigating and settling expected claims.

- Expected Investment Income - Investment income expected to be earned on the cash flow generated from the collection of premiums, net of acquisition costs, in advance of the payment of claims and claim adjustment expenses.

- Liability for Claim Adjustment Expenses (Loss Expense Reserves) - The amount needed to provide for the estimated ultimate cost required to investigate and settle claims relating to insured events that have occurred on or before a particular date (ordinarily, the balance sheet date), whether or not reported to the insurer at that date.

- Liability for Unpaid Claims (Loss Reserves) - The amount needed to provide for the estimated ultimate cost of settling claims relating to insured events that have occurred on 01: before a particular date (ordinarily, the balance sheet date). The estimated liability includes the amount of money that will be required for future payments on both (a) claims that have been reported to the insurer and (b) claims relating to insured events that have occurred but have not been reported to the insurer as of the date the liability is estimated.

- Long-Duration Contract - A contract that is expected to remain in-force for an extended period, is generally not subject to unilateral changes in its provisions and requires the performance of various functions and services for an extended period.

- Maintenance Costs - Costs associated with maintaining records relating to insurance contracts and with the processing of premium collections and commissions.

- Premium Deficiency on Short-Duration Contracts - The amount by which anticipated claims, claim adjustment expenses, policyholder dividends, unamortized acquisition costs and maintenance expenses exceed related income.

- Short-Duration Contract - A contract that provides insurance protection for a fixed period of short duration and enables the insurer to cancel the contract or to adjust the provisions of the contract at the end of any contract period, such as adjusting the amount of premiums charged or coverage provided. Most property and liability policies are considered short-duration contracts.

- Statutory Accounting Practices - Accounting practices prescribed 01: permitted by insurance regulatory authorities.

- Time Value of Money - The economic effects to the insurance enterprise of the time lag between the collection of premiums and the payment of claims and expenses considered either by estimating expected investment income or by discounting to present value future claim payments and expenses.

- Underwriting - The assumption of risk in consideration of receiving a premium.

- Underwriting Loss - Excess of claims, claim adjustment expenses, policy acquisition costs and other operating expenses over earned premiums.

Applicability and Scope

4. The advisory conclusions set forth in this issues paper apply to the determination of premium deficiencies under short-duration contracts issued by all property and liability, life (except mutual life companies), health, title, and mortgage guaranty insurance companies, that prepare financial statements that are intended to present financial position,

results of operations and changes in financial position in conformity with generally accepted accounting principles. Premium deficiency determination methodology for long-duration contracts, as set forth in existing accounting literature, uses present value techniques, thus obviating the need to consider the time value of money separately.

ISSUE NO. 1 - CONSIDERATION OF THE TIME VALUE OF MONEY

Statement of the Issue

5. Should the time value of money (as defined in paragraph 3) be considered in determining the existence and amount of premium deficiencies?

Discussion

6. The audit guide states that "...since the premium is expected to pay losses and expenses, and provide a margin of profit over the term of the policy, the portion measured by the unexpired term should be adequate to pay policy liabilities (principally losses and loss expenses) and return premiums during the unexpired term..." Further, the audit guide suggests that the premium should be adequate to recover any unamortized acquisition costs. FASB Statement No. 5, paragraph 96,

requires the accrual of a net loss that probably will be incurred on insurance policies that are in force, provided that the loss can be reasonably estimated.

7. The audit guide is silent on whether the time value of money should be considered in the calculation of premium deficiencies. FASB Statement No. 5 does not give specific guidance for the calculation of premium deficiencies.

8. The determination of the existence of a premium deficiency is a profitability test based on an earnings stream to be derived from the acceptance of an insurance contract, The recognition of the time value of money in the computation of premium deficiencies is considered in this issues paper as it relates to the method of determining the existence of and accounting for a deficiency. The Committee believes that the issues of discounting claims and the recognition of the time value of money in the computation of premium deficiencies should be addressed separately.

Present Accounting Practice

9. It is difficult to determine the present extent to which the time value of money is considered in computing premium deficiencies in the insurance industry. The SOP and FAS 60 require disclosure of the fact that a company considers

expected investment income in its methodology. The amount of investment income used has generally not been disclosed. Further, property and liability insurance enterprises generally record claims from short-duration contracts at estimated ultimate cost rather than at present value. Some do, however, discount certain claims, such as lifetime workers' compensation claims.

Views on the Issue

10. Some believe that the consideration of the time value of money in the computation of premium deficiencies is in accordance with generally accepted accounting principles. The concept of recognizing premium deficiencies is based on the generally accepted accounting principle of making provisions for probable losses on contracts currently in force. That concept relates to operating losses on contracts in their entirety, and therefore the determination should reflect all revenues and expenses relating to those contracts. Since the premium is collected in advance of the payment of claims and expenses, the time value of money is an integral part of an insurance enterprise's operations.

11. Premiums are not the only source of cash generated by the issuance of an insurance policy. An insurer realizes substantial cash flows in advance of the time that such funds are disbursed in the form of claim payments. Such funds are customarily invested in income-producing assets until they are needed to fulfill the obligations which arise as a result of the issuance of the insurance contract.

12. Some believe it is unrealistic to assert that the economic gain from incurring the costs of selling and issuing an insurance policy will only result from the excess of premiums over claims and claims adjustment expenses. Income generated by the investment of the funds obtained as the result of incurring selling costs is also directly associated with those costs and therefore, the time value of money should be considered in determining the need to recognize a premium deficiency (that is, the need to reduce unamortized acquisition costs or accrue a liability as required by FAS 60). According to paragraph 20 of FASB Statement of Financial Accounting Concepts No. 3, an asset "embodies a probable future benefit that involves a capacity... to contribute directly or indirectly to future net cash inflows." Unamortized acquisition costs should not be required to be charged to expense when it can be demonstrated that the asset will benefit future periods through the production of investment income. As discussed in

paragraph 26 of FASB Statement of Financial Accounting Concepts No. 3, "Once acquired, an asset continues as an asset until...some other event or circumstance destroys the future benefit."

13. Historically, the property and liability insurance industry has used investment income to offset underwriting losses. A.M. Best Co. reports that in 1974, the property/liability industry produced an underwriting loss before policyholders' dividends of $1.9 billion with investment income of $3.8 billion. In 1981, A. M. Best's estimate is that the industry had an underwriting loss before policyholders' dividends of approximately $4.5 billion which was more than offset by investment income of over $13.2 billion. The industry continued to rely heavily on investment income in 1982.

14. Most observers recognize that insurance companies cannot depend solely on premium revenues to cover claim costs and other expenses. Some believe it does not make sense to view the time value of money, a significant consideration of insurance enterprises, as if it were just an incidental factor. They believe that the failure to consider the time value of money in calculating premium deficiencies blurs the fact that most lines of insurance are ultimately profitable.

Some insurance regulatory authorities, in fact, require the time value of money to be considered in establishing certain premium rates.

15. Proponents of considering the time value of money in the computation believe that current industry experience demonstrates that there is no unresolved issue - practice has resolved it. Competitive pressure and high investment yields have forced insurance enterprises to change premium collection patterns (for example, increased retrospective rating) and reduce rates. To require the determination of premium adequacy on a basis different from that used to establish the premium they believe is illogical and does not reflect the economics of the business.

16. Some believe, however, that the time value of money should not be considered in the calculation of premium deficiencies. FASB Statement No. 5 defines a net loss, (that is, a premium deficiency) as "a loss in excess of deferred premiums." They believe that the term "deferred premiums" is intended to mean "unearned premiums" as commonly used in the insurance industry. They point out that the audit guide indicates that the portion of the premium measured by the unexpired term should be adequate to pay policy liabilities

and recover unamortized acquisition costs. Neither of these pronouncements suggest that "premiums" is anything but the consideration to be paid for an insurance policy. Thus, they believe its use indicates that the FASB (or AICPA) did not intend to consider the time value of money in determining a net loss on short-duration contracts.

17. Additional support for their position is contained in the audit guide's discussion of acquisition costs. Regarding the recoverability of acquisition costs, the audit guide suggests that consideration be given to (a) the anticipated loss ratio, (b) the anticipated loss expense ratio, and (c) the anticipated ratio of expenses subsequent to acquisition. No mention is made of the time value of money, and therefore its consideration for determining a premium deficiency is inappropriate.

18. Further, they believe that considering the time value of money in the computation of premium deficiencies is not otherwise supported by generally accepted accounting principles applicable to testing the realization of asset values. In testing the recoverability of asset carrying amounts, they believe it is only appropriate to consider income directly attributable to that asset during the recovery period. The income considered must be identified as being

directly related to the asset being evaluated. In testing for premium deficiencies, the asset being tested for recoverability is a deferred charge, which does not and cannot generate investment income.

19. Some further believe that contracts indicating possible deficiency problems may have already consumed substantially all of the premium in paying claims and expenses at the computation date. Accordingly, considering the time value of money would be inappropriate in these cases.

20. Those who argue against consideration of the time value of money also cite paragraph 109(d) of Statement of Financial Accounting Standards No. 13, Accounting for Leases, which relative to leveraged leases, indicates that "the anticipation of future interest on funds expected to be held temporarily has no support in present generally accepted accounting principles." Further, paragraph 45 of that statement indicates that "if at anytime during the lease term the application of the method prescribed [which excludes future interest on funds] ... would result in a loss being allocated to future years, that loss shall be recognized immediately."

Advisory Conclusion

21. The time value of money (as defined in paragraph 3) should be considered in the computation of premium deficiencies.

ISSUE NO. 2 - INCOME RECOGNITION

Statement of the Issue

22. Should expected investment income be recognized to offset anticipated underwriting losses on unexpired contracts?

Views on the Issue

23. Some, while not necessarily believing that it is inappropriate to consider the time value of money in the determination of premium deficiencies, are concerned with the pattern of reported earnings. They point out that even though profits will ultimately result, it is possible a loss would be reported for the remainder of the in-force period, they believe that failure to give current recognition to this future loss, even though it will be offset by investment income after the in-force period, is inappropriate under generally accepted accounting principles. They suggest that a portion of

the expected investment income should be recorded to offset losses that would otherwise be reported as the remainder of the policy term expires. (See Appendix VII for an example.)

24. Those in favor of considering the time value of money in the determination of premium deficiencies recognize the existence of this "timing" concern but believe that it results from an existing financial reporting framework rather than from the loss contingency recognition test under discussion. They believe that the determination of whether there is a loss contingency related to a group of policies should result in an accounting entry only if that determination indicates that the policies will ultimately result in a net loss to the enterpriser. It should not change the accounting model, which attempts to allocate costs to the appropriate periods as described in paragraphs 84-89 of Concepts Statement No. 3. The accounting model is not based on a smoothing concept.

Advisory Conclusion

25. Expected investment income should not be recorded to offset underwriting losses that may be reported during the remainder of the policy term.

ISSUE NO. 3 - DETERMINATION OF THE TIME VALUE OF MONEY

Statement of the Issue

26. If the time value of money is to be considered in the computation of premium deficiencies, how should it be determined?

Discussion

27. The determination of the existence of a premium deficiency requires the projection of claims and claim adjustment expenses for the in-force contracts. Accordingly, all of the potential variability inherent in estimating claim liabilities is present in the determination. The consideration of the time value of money adds the additional variables of payment pattern and investment yields.

28. Generally speaking, the longer the claims settlement pattern, the greater the likelihood that the time value of money has been considered in the establishment of the premium. The dilemma is that lines of insurance with longer settlement patterns, by their very nature, have greater potential variability in payment pattern and ultimate cost.

Views of the Issue

29. The time value of money can be calculated and considered in the computation of premium deficiencies by discounting claims and expenses (present value approach) or by including in the computation investment income expected to be earned on net cash flows.

Discounting Approaches

30. Those who favor the discounted claims and expenses approach believe that it is consistent with existing accounting practices for realization tests (e.g., real estate evaluation) and contractual obligation determinations (e.g., pensions and long term liabilities without stated interest rates). They suggest two alternative methods of computation.

31. Some suggest that costs in a premium deficiency test should consist of (a) the present value of future payments for claims, claim adjustment expenses and maintenance expenses expected to be incurred during the unexpired portion of the contracts, plus (b) unamortized acquisition costs. A premium deficiency would be recognized when such costs exceeded the related unearned premiums. This approach views the unexpired portion of the in-force contracts or policies as if they were

separate and distinct and gives no recognition of the time value of money associated with the expired portion of the contracts. (An example of the computation is set forth in Appendix II.)

32. Others believe that a premium deficiency test should give recognition to the time value of money associated with both the expired and unexpired portion of the contracts. They believe the calculation should be based on the discounted value of all unpaid claims and expenses. They contend that expected costs in a premium deficiency test should consist of (a) the present value of future payments for claims, claim adjustment expenses and maintenance expenses incurred and expected to be incurred on in-force policies, less liabilities recorded at the measurement date, plus (b) related unamortized acquisition costs. A premium deficiency would be recognized when such costs exceeded the related unearned premiums. (An example of this computation is set forth in Appendix III.)

Expected Investment Income Approaches

33. Those who favor using an expected investment income method rather than a discounting approach believe a premium deficiency is determined by evaluating the ultimate profitability using all cash flows from the in-force policies.

They believe only an investment income approach accomplishes this objective and that it is inappropriate to assume that the discount (difference between total future cash disbursements and the present value of such payments) is the equivalent of expected investment income. Since the discounting approach does not consider the amount of investments generated from the in-force premiums, the amount of discount used in the test could significantly exceed the expected investment income and thereby understate the premium deficiency.

34. Those who favor an expected investment income approach further believe that if it is probable that a group of contracts will ultimately result in a loss, the ultimate amount of that loss should be recognized currently. A present value approach, when applied to loss contracts, results in the current recognition of only the present value of the ultimate loss, with additional losses to be recognized in future periods. (See illustration in Appendixes V and VI.)

35. One approach to the determination of investment income is to use investment income attributable to the unearned premium reserve. This approach assumes that invested assets equivalent to unearned premiums are the only funds available for investment. Using unearned premiums as the base for the calculation is conservative since it anticipates investment income for only the remaining in-force period of the policy contract.

36. A modification to the above approach is to adjust the unearned premium base by deducting unamortized acquisition costs and agents' balances. This approach further refines the concept of developing the amount of invested assets associated with unexpired contracts.

37. However, some believe that the purpose of the unearned premium reserve is to prorate or recognize premiums over the policy term (or over the period of risk, if the period of risk is different than the policy term). This reserve is not intended to represent cash available for investments. Available cash depends on the payment pattern of acquisition costs, maintenance costs, claims and claim adjustment expenses. Using unearned premium as the base emphasizes the accounting rather than the actual funds flow.

38. An alternative approach is to develop investment income generated from assets equivalent to "holding" claim and claim adjustment liabilities. Further refining this approach, some would add the unearned premium or adjusted unearned premium liabilities. Those who believe claim liabilities are an appropriate base, therefore, believe that when claim liabilities have been discounted, there is no need to redevelop investment income for use in the premium deficiency calculation.

39. Others believe that investment income should be developed using all cash flows relating to the in-force policies. Under the approach of using earnings expected to be generated from investments of the in-force premiums, it is necessary to develop a cash flow model for a closed group of contracts; that is, only for in-force contracts existing at the date the premium deficiency test is performed.

40. The funds flow concept recognizes the amount and timing of all significant cash receipts and disbursements related to in-force policies. Typically, the entire premium is not available for investment. Some portion of in-force premiums is not collected in advance and a portion is used to pay acquisition costs, primarily commissions and taxes. Thus, only the net cash is invested and earns income. Also, the receipt of cash may be delayed in some types of policies such as retrospectively rated policies.

41. An example of the investment income approach using all cash flows relating to the in-force contracts or policies is set forth in Appendix I. (A reconciliation to the discounting approach is included in Appendix IV.)

Factors Affecting Calculations

42. Under either the discounting or the investment income approach, the claim payment pattern and interest or discount rate selected have a significant impact on the. computation. Other factors will have less of an impact. For instance, making the assumption that all non-claim related expenses (that is, commissions, premium taxes, etc.) have been paid and that in-force premiums have been collected in the first year may have an insignificant effect (as opposed to trying to develop payment patterns for these items for one to two years) .

Claim Payment Pattern

43. The claim payment pattern impacts the calculation, since the longer the interval between collection of the premium and payment of the claims, the greater the investment income earned. The interval varies widely by line of business. It is generally recognized that most property claims are settled within twelve months after the accident date. However, third-party liability claims generally have a longer, less determinable pay-out pattern. If there is a high degree of variability in claim payment patterns, the risk of potential adverse deviation (early settlement of claims) should be considered in the length of the period over which investment

income or the discount is to be developed. A high degree of variability does not preclude consideration of the time value of money, but suggests reduction of the length of the period to a point where there is a high confidence level that claims will not be paid.

Interest Rates

44. The interest rate used in the computation is an important consideration. As an example, had a 6% rather than 7% rate been selected for the example on Appendix I page 34, total investment income would have been $28,235 rather than $34,609, a reduction of 18.4%.

45. Some prefer using a current market rate. They believe that the current market rate (or new money rate) best reflects what a third party would use as the basis for developing a reinsurance premium for the assumption of existing claim liabilities. They believe that new money rates applicable to investment securities with maturities similar to those of the claim liabilities are the most appropriate if consistency with present value techniques described in APB Opinion No. 21 is to be achieved.

46. Others believe that the rate selected should be based on the projected yield derived from an insurance enterprise's existing invested assets adjusted for expected yields on the reinvestment of earnings. They point out that only a portion of the cash derived from premiums is invested at current market or new money rates. A significant portion is used to pay acquisition costs, to meet current operating expenses, to pay current year claims and, in some instances, to pay prior year claim liabilities.

47. Those who favor an expected portfolio rate also point out that the premium deficiency computation is a profitability test which should be based upon an insurance enterprise's actual and expected investment performance. Use of a market rate is not appropriate since it may not be representative of the actual earnings to be realized.

48. Others believe that the rate should be the anticipated yield assumed (implicitly or explicitly) in setting the premium rates on underlying policies since this rate best reflects the underwriting and investment decision made by the insurer at the time the policy was written. Opponents of this method believe it is too subjective and does not provide definitive guidance for selecting a rate.

49. Many believe that the expected investment income used in the premium deficiency computation should be reduced if the enterprise's total invested assets are less than the present value of the liabilities.

Advisory Conclusions

50. A premium deficiency under short-duration contracts should be recognized currently to the extent that the sum of expected claims, claim adjustment expenses, dividends to policyholders and maintenance costs, and unamortized acquistion costs exceeds related future revenues which include unearned premiums and expected investment income.

51. The amount of investment income to be used should be the future earnings expected to be generated from the investment of the net cash available from in-force premiums. Accordingly, the period over which the investment income will be realized is the entire period of claim settlement.1

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1 Recognizing the high degree of variability in claim payment patterns for certain lines of business, the risk of potential adverse deviation (early settlement of claims) should be considered in estimating the length of the period over which investment income is developed. The number of years used in the calculation should be based on the enterprise's experience giving appropriate consideration to claim settlement expectations and determined on a basis that provides a reasonably acceptable confidence level that the estimate will equal or be less than the actual period of claim settlement.

52. The interest rate used should be a rate equal to the expected yield to be earned on total invested assets (expected portfolio rate) over the period that the claim liabilities are expected to be paid. The yield is the ratio of interest income, dividends and rents, net of investment expenses, to the total invested assets.

53. The total amount of expected investment income used in the determination of a premium deficiency should be reduced proportionately if the enterprise's total recorded amount of invested assets plus expected future investment income is less than its total liabilities.

54. If premium deficiency calculations are being made for a line of business grouping for which liabilities for claims and claim adjustment expenses are discounted, the discount should be eliminated and expected investment income should be determined in accordance with the preceding paragraphs.

55. In accordance with FAS 60, paragraphs 32-34, insurance contracts should be grouped consistent with the enterprise's manner of acquiring, servicing and measuring the profitability of its insurance contracts to determine if a

premium deficiency exists. A premium deficiency should first be recognized by charging any unamortized acquisition costs to expense to the extent required to eliminate the deficiency. (See Appendix V.) If the premium deficiency is greater than unamortized acquisition costs, a liability should be accrued for the excess deficiency. (See Appendix VI.)

APPENDIXES

APPLICATION OF EXPECTED INVESTMENT INCOME METHODOLOGY

56. This Appendix illustrates a methodology consistent with the advisory conclusions for considering investment income in a premium deficiency test for a group of policies. Assumptions set forth in the Appendix are also used in subsequent Appendixes. FASB 60 provides guidance as to how a company's business should be grouped for purposes of making the test of recoverability. Specifically, FASB 60 provides that "insurance contracts shall be grouped consistent with the enterprise's manner of acquiring, servicing, and measuring profitability of its insurance contracts."

57. The computation, which is made as of December 31, 1981, indicates a premium deficiency exists before the inclusion of investment income but not after its inclusion. The block of business being tested is expected to experience a loss and loss expense (claim) ratio of 78% of earned premium as set forth on page I-3. The underwriting expenses incurred were 30.16% of premiums written, producing a combined ratio of 108.16%. The example assumes that business development or acquisition costs amount to 25% of premiums written. The difference between the incurred ratio of 30.16% and the deferral ratio of 25% is expensed currently as period costs. The payment pattern of the anticipated claims is derived on Page I-4 using payment data from Schedule P in the Annual

Statement.2 since Schedule P presents loss and loss expense payments as a percentage of earned premiums, it is necessary to convert this data to an incurred loss base; the lower portion of Page 32 accomplishes this. By reviewing historical payment patterns and evaluating current factors, an expected accident year payment pattern is developed.

58. On Page 33, this expected payment pattern is applied to anticipated accident year claims. For this example, the pattern is assumed to be consistent with history.

59. Using this expected payment pattern and making certain assumptions concerning premium collections, underwriting and maintenance expense payments, and interest rates, the investment income related to this block of in-force premiums is computed on Page 34.

60. The premium deficiency test performed on Page 35 indicates an excess. Therefore, no provision for premium deficiency would be made in 1981. To the extent a premium deficiency had been indicated, unamortized acquisition costs would have to be charged to expense first, with a liability established for the remaining deficiency, if any.

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2 For the purpose of this illustration, it is presumed that Schedule P lines of business are short-duration contracts.

ANTICIPATED EXPERIENCE ON GROUP OF IN-FORCE POLICIES

	Earned On Unexpired	Unearned	In-Force
Premium	**$182,000**	**$168,000**	$350,000
Expected Loss and Loss Expense (Claim) Ratio	78%	78%	78%
	$141,960	$131,040	$273,000

Explanation

Analysis of individual company experience indicates that the expected loss and loss expense (claim) ratio will be 78% on the block of business. The "earned on unexpired" was earned in 1981 and the related incurred loss and loss expense is estimated to be $141,960; the "unearned" portion will expire in 1982, and expected loss and loss expense is $131,040. The "Underwriting and Investment Exhibit" in the Annual Statement can be used as a source of in-force and unearned premium information in the absence of better sources. The expected loss (claim) ratio is estimated based upon experience and judgement.

PAYMENT PATTERN

(Bracketed Percentages Are Estimated)

Loss and Loss Expense (Claim) Payments as a % of Earned Premium

	Accident Year				
Payment Year	1977	1978	1979	1980	1981
Current	23.2	23.7	24.9	25.4	24.5
1st subsequent	20.4	20.9	21.8	22.4	(21.6)
2nd	11.0	11.1	11.9	(12.0)	(11.6)
3rd	9.0	9.2	(9.6)	(9.8)	(9.4)
4th	6.0	(5.9)	(6.5)	(6.4)	(6.0)
5th and subsequent	(3.4)	(3.2)	(3.3)	(3.0)	(2.9)
	73.0	74.0	78.0	79.0	76.0

Loss and Loss Expense (Claim) Payments as a % of Total Incurred Losses (Claims)

	Accident Year					
Payment Year	1977	1978	1979	1980	1981	Select
Current	31.8	32.0	32.0	32.1	32.2	32.0
1st subsequent	28.0	28.3	28.0	28.3	(28.4)	28.0
2nd	15.1	15.0	15.2	(15.2)	(15.2)	15.0
3rd	12.3	12.4	(12.3)	(12.4)	(12.3)	12.0
4th	8.2	(8.0)	(8.3)	(8.1)	(8.0)	8.0
5th and subsequent	(4.6)	(4.3)	(4.2)	(3.9)	(3.9)	5.0
	100%	100%	100%	100%	100%	100%

Explanation

The top portion of this exhibit can be derived from Schedule P, Part 3 in the Annual Statement. The lower portion converts the percentages in the top portion to a loss base rather than an earned premium base. The percentages in brackets are estimates of the settlement pattern of losses still unsettled at the end of 1981. The percentages in the "select" column are chosen after reviewing the trend in prior years. These percentages are used on page 33.

SETTLEMENT PATTERN OF CLAIMS RELATED TO IN-FORCE POLICIES

Payment Year	Claims Related to 1981 Earned Premium		Claims Related to 1982 Earned Premium		Claims Related In-Force Premium	
	%	$	%	$	%	$
1981	32.0	45,427			16.6	45,427
1982	28.0	39,749	32.0	41,933	29.9	81,682
1983	15.0	21,294	28.0	36,691	21.2	57,985
1984	12.0	17,035	15.0	19,656	13.4	36,691
1985	8.0	11,357	12.0	15,725	9.9	27,082
1986	5.0	7,098	8.0	10,483	6.5	17,581
1987			5.0	6,552	2.5	6,552
	100.0	141,960	100.0	131,040	100.0	273,000

Explanation

This exhibit shows the computation of the in-force payment pattern using accident year data. Where in-force payment data is available, it should be used. The payment data is used in the computation of investment income on page 34.

COMPUTATION OF EXPECTED INVESTMENT INCOME

Year	Cash Opening Balance	Premiums Received	Underwriting Costs Paid 30.16%	Claims	Maintenance Costs .83%	Cash Ending Balance Before Investment Income	Cash Average Balance	Investment Income (7.0%)
1981	-		(105,581)	(45,427)	-	198,992	99,496	6,965
1982	205,957	-	-	(81,682)	(1,046)	123,229	164,593	11,522
1983	134,751	-	-	(57,985)	(742)	76,024	105,388	7,377
1984	83,401	-	-	(36,691)	(469)	46,241	64,821	4,537
1985	50,778	-	-	(27,082)	(347)	23,349	37,064	2,594
1986	25,943	-	-	(17,581)	(228)	8,134	17,038	1,193
1987	9,327	-	-	(6,552)	(87)	2,688	6,008	421
		350,000	(105,581)	(273,000)	(2,919)			34,609

Expected Investment **Income (1982-1987)** 27,644

Assumptions

(1) Insurance contracts are issued and premiums are collected evenly throughout **the year and** underwriting costs are incurred and paid as premiums are collected.

(2) Claims are paid evenly throughout the year.

(3) Maintenance costs are .83% of premiums and are paid in the same pattern as claims.

(4) Investment income is earned on average assets and is reinvested.

(5) Historical yield is 5.5%; however, the expected yield which gives consideration to the historical yield, net cash invested at new money rates and anticipated reinvestment rates, is 7.0%.

PREMIUM DEFICIENCY TEST
USING EXPECTED INVESTMENT INCOME
AS OF DECEMBER 31, 1981
(PROFITABLE CONTRACTS)

Unearned Premiums at December 31, 1981		$168,000
Less Expected Costs (Undiscounted):		
Claims and Claim Adjustment Expenses (see I-5)	$131,040	
Maintenance Costs (see I-6)	2,919	
Amortization of Policy Acquisition Costs (25% of unearned premiums)	42,000	
		175,959
Premium Deficiency Before Expected Investment Income		(7,959)
Expected Investment Income (see I-6)		27,644
Excess of Income over Costs		$ 19,685

ILLUSTRATIVE INCOME STATEMENT

PREMIUM DEFICIENCY BASED ON EXPECTED INVESTMENT INCOME

(PROFITABLE CONTRACTS)

	Year Ended December 31							Total
	1981	1982	1983	1984	1985	1986	1987	1981-1987
Premiums written	$350,000	$ -	$ -	$ -	$ -	$ -	$ -	$350,000
(Increase) decrease in unearned premiums	(168,000)	168,000	-	-	-	-	-	-
Premiums earned	182,000	168,000	-	-	-	-	-	350,000
Claims incurred (78% of premiums earned)	141,960	131,040	-	-	-	-	-	273,000
Amortization of policy acquisition costs (25% of premiums earned)	45,500	42,000	-	-	-	-	-	87,500
Other underwriting expenses	18,081	-	-	-	-	-	-	18,081
Maintenance costs	-	1,046	742	469	347	228	87	2,919
Provision for premium deficiency	-	-	-	-	-	-	-	-
	205,541	174,086	742	469	347	228	87	381,500
Income (loss) from underwriting	(23,541)	(6,086)	(742)	(469)	(347)	(228)	(87)	(31,500)
Investment income	6,965	11,522	7,377	4,537	2,594	1,193	421	34,609
Income (loss) from operations	$(16,576)	$ 5,436	$ 6,635	$ 4,068	$ 2,247	$ 965	$ 334	$ 3,109

COMPUTATION OF PRESENT VALUE (DISCOUNTING) OF CLAIMS AND MAINTENANCE COSTS TO BE INCURRED

Payment Year	Claims Related to 1982 Earned Premium	Maintenance Costs	Total Claims and Maintenance Costs	Present Value Interest Factor	Present Value of Claims and Maintenance Costs
1982	41,933	1,046	42,979	.96500000	41,475
1983	36,691	742	37,433	.90186915	33,760
1984	19,656	469	20,125	.84286837	16,963
1985	15,725	347	16,072	.78772744	12,660
1986	10,483	228	10,711	.73619387	7,885
1987	6,552	87	6,639	.68803160	4,568
	131,040	2,919	133,959		117,311

Explanation

This exhibit calculates the present value as of December 31, 1981 of claim payments (and maintenance costs) for expected claims. Assumptions, including a 7%, compounded annually, interest rate, are the same as in Appendix I. The present value factor used is the average of the beginning of the year and the end of the year factors to adjust for the payment of claims and maintenance costs evenly throughout the year.

PREMIUM DEFICIENCY TEST

USING DISCOUNTED CLAIMS AND MAINTENANCE COSTS TO BE INCURRED

AS OF DECEMBER 31, 1981

Unearned Premiums at December 31, 1981		$168,000
Less Expected Costs:		
Present Value of Claims and Maintenance Costs To Be Incurred (see page 37)	$117,311	
Amortization of Policy Acquisition Costs (25% of unearned premiums)	42,000	159,311
Excess of Income over Costs		$ 8,689

COMPUTATION OF PRESENT VALUE (DISCOUNTING)

OF ALL UNPAID CLAIMS AND MAINTENANCE COSTS

Payment Year	Claims To Be Paid	Maintenance Costs	Total Claims and Maintenance Costs	Present Value Interest Factor	Present Value of Claims and Maintenance Costs
1982	81,682	1,046	82,728	.96500000	79,833
1983	57,985	742	58,727	.90186915	52,964
1984	36,691	469	37,160	.84286837	31,321
1985	27,082	347	27,429	.78772744	21,606
1986	17,581	228	17,809	.73619387	13,111
1987	6,552	87	6,639	.68803160	4,568
	227,573	2,919	230,492		203,403
Less claim liability recorded at December 31, 1981:					
Claims related to 1981 earned premium				141,960	
Less - Claims paid in 1981				45,427	
					96,533
					106,870

Explanation

This exhibit calculates the present value of payments to be made for all claims and maintenance costs subsequent to December 31, 1981. Assumptions, including a 7%, compounded annually, interest rate, are the same as in Appendix I. The present value amount is then compared to the recorded claim liability (the ultimate unpaid claim costs on the expired portion of the contract). The difference represents (a) the discount on incurred claims, plus (b) the discounted amount (present value) of expected claims and maintenance costs to be incurred subsequent to December 31, 1981. The present value factor used is the average of the beginning of the year and end of the year factors to adjust for the payment of claims and maintenance costs evenly throughout the year.

PREMIUM DEFICIENCY TEST

USING DISCOUNTED UNPAID CLAIMS AND MAINTENANCE COSTS

AS OF DECEMBER 31, 1981

Unearned Premiums at December 31, 1981		**$168,000**
Less Expected Costs:		
Present Value of Claims and Maintenance Costs Net of Recorded Liability (see page 39)	$106,870	
Amortization of Policy Acquisition Costs (25% of unearned premiums)	42,000	148,870
Excess		$ 19,130

COMPARISON OF EXPECTED INVESTMENT INCOME AND DISCOUNTING METHODS AS OF INCEPTION OF CONTRACTS FOR PROFITABLE CONTRACTS

	Expected Investment Income Method	Discounting Method
Premiums	$350,000	$337,749
Claims	273,000	231,527
Policy acquisition costs	87,500	84,437
Other underwriting expenses	18,081	17,448
Maintenance costs	2,919	2,406
	381,500	335,818
Income (loss) from underwriting	(31,500)	1,931
Investment income	34,609	-
Excess of income over costs	$ 3,109	$ 1,931

Explanation

The above compares the results of a premium deficiency computation for the entire group of policies under the anticipated investment income approach (Appendix I) versus the discounting approach (Appendix III). The difference in income from operations results from discounting the cumulative profits.

COMPARISON OF PREMIUM DEFICIENCY COMPUTATIONS FOR LOSS CONTRACTS (LOSS LESS THAN POLICY ACQUISITION COSTS)

This appendix compares the results of using expected investment income versus discounting unpaid claims and maintenance costs in the computation of premium deficiencies in the situation where an ultimate loss is expected on a block of policies. Assumptions are identical to those set forth in Appendix I (and as used in Appendix III) except that premiums have been reduced from $350,000 to $300,000, with no change in the dollar amount of costs.

COMPUTATION OF EXPECTED INVESTMENT INCOME

(LOSS CONTRACTS)

Year	Cash Opening Balance	Premiums Received	Underwriting Costs Paid	Claims	Maintenance Costs	Cash Ending Balance Before Investment Income	Cash Average Balance	Investment Income (7.0%)
1981	$ -			$(45,427)	$ -	$148,992	$ 74,496	$ 5,215
1982	154,207	-	-	(81,682)	(1,046)	71,479	112,843	7,899
1983	79,378	-	-	(57,985)	(742)	20,651	50,014	3,501
1984	24,152	-	-	(36,691)	(469)	(13,008)	5,572	390
1985	(12,618)	-	-	(27,082)	(347)	(40,047)	(26,332)	(1,843)
1986	(41,890)	$300,000	$(105,581)	(17,581)	(228)	(59,699)	(50,794)	(3,556)
1987	(63,255)	-	-	(6,552)	(87)	(69,894)	(66,560)	(4,660)
		$300,000	$(105,581)	$(273,000)	$(2,919)			$ 6,946
				Expected Investment Income (1982-1987)				$ 1,731

Assumptions

(1) Insurance contracts are issued, premiums are collected evenly throughout the year and underwriting costs are incurred and paid as premiums are collected.

(2) Claims are paid evenly throughout the year.

(3) Maintenance costs are $2,919 and are paid in the same pattern as claims.

(4) Investment income is earned on average assets and is reinvested.

(5) Historical yield is 5.5%; however, the expected yield which gives consideration to the historical yield, net cash invested at new money rates and anticipated reinvestment rates, is 7.0%.

ILLUSTRATIVE INCOME STATEMENT

PREMIUM DEFICIENCY BASED ON EXPECTED INVESTMENT INCOME

(LOSS CONTRACTS)

	Year Ended December 31							Total
	1981	1982	1983	1984	1985	1986	1987	1981-1987
Premiums written	$300,000	$ -	$ -	$ -	$ -	$ -	$ -	$300,000
(Increase) decrease in unearned premiums	(144,000)	144,000	-	-	-	-	-	-
Premiums earned	156,000	144,000	-	-	-	-	-	300,000
Claims incurred	141,960	131,040	-	-	-	-	-	273,000
Amortization of policy acquisition costs	45,500	42,000	-	-	-	-	-	87,500
Other underwriting expenses	18,081	-	-	-	-	-	-	18,081
Maintenance costs	-	1,046	742	469	347	228	87	2,919
Provision for premium deficiency	30,228	(30,228)	-	-	-	-	-	-
	235,769	143,858	742	469	347	228	87	381,500
Income (loss) from underwriting	(79,769)	142	(742)	(469)	(347)	(228)	(87)	(81,500)
Investment income	5,215	7,899	3,501	390	(1,843)	(3,556)	(4,660)	6,946
Income (loss) from operations	$(74,554)	$ 8,041	$ 2,759	$ (79)	$ (2,190)	$ (3,784)	$ (4,747)	$ (74,554)

Premium Deficiency Test (Expected Investment Income Method) as of December 31, 1981:

Unearned premiums at December 31, 1981	$144,000
Expected costs (undiscounted) (see pg. 35)	175,959
Expected underwriting loss - January 1, 1982 to December 31, 1987	(31,959)
Expected investment income	1,731
Deficiency, recorded as a reduction of unamortized acquisition cost	$(30,228)

ILLUSTRATIVE INCOME STATEMENT

PREMIUM DEFICIENCY BASED ON DISCOUNTING UNPAID

CLAIM LIABILITIES AND MAINTENANCE EXPENSE

(LOSS CONTRACTS)

	1981	Year Ended December 31 1982	1983	1984	1985	1986	1987	Total 1981-1987
Premiums written	$300,000	$ -	$ -	$ -	$ -	$ -	$ -	$300,000
(Increase) decrease in unearned premiums	(144,000)	144,000	-	-	-	-	-	-
Premiums earned	156,000	144,000	-	-	-	-	-	300,000
Claims incurred	141,960	131,040	-	-	-	-	-	273,000
Amortization of policy acquisition costs	45,500	42,000	-	-	-	-	-	87,500
Other underwriting expenses	18,081	-	-	-	-	-	-	18,081
Maintenance costs	-	1,046	742	469	347	228	87	2,919
Provision for premium deficiency	4,870	(4,870)	-	-	-	-	-	-
	210,411	169,216	742	469	347	228	87	381,500
Income (loss) from underwriting	(54,411)	(25,216)	(742)	(469)	(347)	(228)	(87)	(81,500)
Investment income	5,215	7,899	3,501	390	(1,843)	(3,556)	(4,660)	6,946
Income (loss) from operations	$(49,196)	$(17,317)	$ 2,759	$ (79)	$ (2,190)	$ (3,784)	$ (4,747)	$

Premium Deficiency Test (Discounting Method) at December 31, 1981:

Unearned premiums	$144,000
Less expected costs:	
Present value of claims and maintenance costs, less recorded liability (see Appendix III)	106,870
Amortization of policy acquisition costs	42,000
	$148,870
Deficiency, recorded as a reduction of unamortized acquisition costs	$ (4,870)

COMPARISON OF PREMIUM DEFICIENCY COMPUTATIONS AT INCEPTION OF CONTRACTS FOR LOSS CONTRACTS

	Expected Investment Income Method	Discounting Method
Premiums	$300,000	$289,499
Claims	273,000	231,527
Policy acquisition costs	87,500	84,437
Other underwriting expenses	18,081	17,448
Maintenance costs	2,919	2,406
	381,500	335,818
Income (loss) from underwriting	(81,500)	(46,319)
Investment income	6,946	-
Deficiency	$(74,554)	$(46,319)

Explanation

The use of the discounting method to determine a premium deficiency on loss contracts results in a lower deficiency than the expected investment income method. This occurs because:

(a) The present or discounted value of a loss will be lower than the undiscounted loss (discounting ultimate loss)

(b) The discounting method does not consider the amount of funds available for investment.

COMPARISON OF PREMIUM DEFICIENCY COMPUTATIONS FOR LOSS CONTRACTS (LOSS GREATER THAN POLICY ACQUISITION COSTS)

This appendix, which is similar to Appendix V, compares the results of using expected investment income versus discounting unpaid claims and maintenance costs in the computation of premium deficiencies in the situation where the expected ultimate loss exceeds policy acquisition costs. Assumptions are identical to those set forth in Appendix I (and as used in Appendix III) except that premiums have been reduced from $350,000 to $300,000, with no change in the dollar amount of costs except for additional anticipated claim payments in the final year of $27,000.

COMPUTATION OF EXPECTED INVESTMENT INCOME

(LOSS CONTRACTS)

Year	Cash Opening Balance	Premiums Received	Underwriting Costs Paid	Claims	Maintenance Costs	Cash Ending Balance Before Investment Income	Cash Average Balance	Investment Income (7.0%)
1981	$ -	$300,000	$(105,581)	$ (45,427)	$ -	$148,992	$ 74,496	$ 5,215
1982	154,207	-	-	(81,682)	(1.046)	71,479	112,843	7,899
1983	79,378	-	-	(57,985)	(742)	20,651	50,014	3,501
1984	24,152	-	-	(36,691)	(469)	(13,008)	5,572	390
1985	(12,618)	-	-	(27,082)	(347)	(40,047)	(26,332)	(1,843)
1986	(41,890)	-	-	(17,581)	(228)	(59,699)	(50,794)	(3,556)
1987	(63,255)	-	-	(33,552)	(87)	(96,894)	(80,074)	(5*605)
		$300,000	$(105,581)	$(300,000)	$(2,919)			$ 6,001
				Expected Investment Income (1982-1987)				$ 786

Assumptions

(1) Insurance contracts are issued and premiums are collected evenly throughout the year and underwriting costs are incurred and paid as premiums are collected.

(2) Claims are paid evenly throughout the year.

(3) Maintenance costs are $2,919.

(4) Investment income is earned on average assets and is reinvested.

(5) Historical yield is 5.5%; however, the expected yield which gives consideration to the historical yield, net cash invested at new money rates and anticipated reinvestment rates, is 7.0%.

ILLUSTRATIVE INCOME STATEMENT

PREMIUM DEFICIENCY BASED ON EXPECTED **INVESTMENT INCOME**

(LOSS CONTRACTS)

	Year Ended December 31							Total
	1981	1982	1983	1984	1985	1986	1987	1981-1987
Premiums written	$ 300,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 300,000
(Increase) decrease in unearned premiums	(144,000)	144,000	-	-	-	-	-	-
Premiums earned	156,000	144,000	-	-	-	-	-	300,000
Claims incurred	156,000	144,000	-	-	-	-	-	300,000
Amortization of policy acquisition costs	45,500	42,000	-	-	-	-	-	87,500
Other underwriting expenses	18,081	-	-	-	-	-	-	18,081
Maintenance costs	-	1,046	742	469	347	228	87	2,919
Provision for premium deficiency	44,133	(44,133)	-	-	-	-	-	-
	263,714	142,913	742	469	347	228	87	408,500
Income (loss) from underwriting	(107,714)	1,087	(742)	(469)	(347)	(228)	(87)	(108,500)
Investment income	5,215	7,899	3,501	390	(1,843)	(3,556)	(5,605)	6,001
Income (loss) from operations	$(102,499)	$ 8,986	$ 2,759	$ (79)	$ (2,190)	$ (3,784)	$ (5,692)	$(102,499)

Premium Deficiency Test (Expected Investment Income Method) at December 31, 1981:

Unearned premiums at December 31, 1981		$144,000
Expected costs (undiscounted)		188,919
Expected underwriting loss - January 1, 1982 to December 31, 1987		(44,919)
Expected investment income		786
Deficiency, recorded as -		
Reduction of unamortized acquisition cost	$42,000	
Liability for loss contracts	2,133	$44,133

ILLUSTRATIVE INCOME STATEMENT

PREMIUM DEFICIENCY BASED ON DISCOUNTING UNPAID

CLAIM LIABILITIES AND MAINTENANCE EXPENSE

(LOSS CONTRACTS)

	Year Ended December 31							Total
	1981	1982	1983	1984	1985	1986	1987	1981-1987
Premiums written	$300,000	$ -	$ -	$ -	$ -	$ -	$ -	$300,000
(Increase) decrease IN UNEARNED premiums	(144,000)	144,000	-	-	-	-	-	-
Premiums earned	156,000	144,000	-	-	-	-	-	300,000
Claims incurred	156,000	144,000	-	-	-	-	-	300,000
Amortization of POLICY ACQUISITION costs	45, 500	42,000	-	-	-	-	-	87,500
Other underwriting expenses	18,081	-	-	-	-	-	-	18,061
Maintenance costs	-	1,046	742	469	347	228	87	2,919
Provision for premium DEFICIENCY	9,407	(9,407)	-	-	-	-	-	-
	228,988	177,639	742	469	347	228	87	408,500
Income (loss) FROM UNDERWRITING	(72,988)	(33,639)	(742)	(469)	(347)	(228)	(87)	(108,500)
Investment income	5,215	7,899	3,501	390	(1,843)	(3,556)	(5,605)	6,001
Income (loss) from OPERATIONS	$(67,773)	$(25,740)	$ 2,759	$ (79)	$ (2,190)	$ (3,784)	$ (5,692)	$(102,499)

Premium Deficiency TEST (DISCOUNTING Method) at December 31, 1981:

Unearned premiums	$144,000
Less expected costs:	
Present value of claims and maintenance costs, less recorded liability	111,407
Amortization of policy acquisition costs	42,000
	$153,407
Deficiency, recorded as a reduction of unamortized acquisition costs	$ (9,407)

COMPARISON OF PREMIUM DEFICIENCY COMPUTATIONS AT INCEPTION OF CONTRACTS FOR LOSS CONTRACTS

	Expected Investment Income Method	Discounting Method
Premiums	$300,000	$289,499
Claims	300,000	248,889
Policy acquisition costs	87,500	84,437
Other underwriting expenses	18,081	17,448
Maintenance costs	2,919	2,406
	408,500	353,180
Income (loss) from underwriting	(108,500)	(63,681)
Investment income	6,001	-
Deficiency	$(102,499)	$(63,681)

Explanation

Similiar to Appendix V, the use of the discounting method to determine a premium deficiency on loss contracts results in a lower deficiency than the expected investment income method. This occurs because:

(a) The present or discounted value of a loss will be lower than the undiscounted loss (discounting ultimate loss)

(b) The discounting method does not consider the amount of funds available for investment.

ILLUSTRATION OF REPORTED EARNINGS PATTERN WHERE EXPECTED INVESTMENT INCOME EXCEEDS UNDERWRITING LOSS

This appendix provides an illustrative income statement for a group of policies which did not have a premium deficiency, but whose reported pattern of earnings would produce a loss in the second year (remainder of the in-force period).

The assumptions are the same as in Appendix I, except that claims are expected to be paid in the fifth year and amount to $310,000 and maintenance costs are $3,272.

COMPUTATION OF EXPECTED INVESTMENT INCOME

Year	Cash Opening Balance	Premiums Received	Underwriting Costs Paid	Claims	Maintenance Costs	Cash Ending Balance Before Investment Income	Cash Average Balance	Investment Income (7.0%)
1981	$ -			-	$ -	$244,419	$122,209	$ 8,555
1982	252,974	-	-	-	(1,046)	251,928	252,451	17,672
1983	269,600	-	-	-	(742)	268,858	269,229	18,846
1984	287,704	$350,000	$(105,581)	-	(742)	286,962	287,333	20,113
11985	307,075	-	-	(310,000)	(742)	(3,667)	151,704	10,619
		$350,000	$(105,581)	$(310,000)	$(3,272)			$75,805
						Expected Investment Income		$67,250

PREMIUM DEFICIENCY TEST

USING EXPECTED INVESTMENT INCOME

AS OF DECEMBER 31, 1981

Unearned Premiums		$168,000
Less Expected Costs (Undiscounted):		
Claims and Claim Adjustment Expenses (310,000 ÷ 350,000 x 168,000)	148,800	
Maintenance Costs	3,272	
Amortization of Policy Acquisition Costs	42,000	194,072
Premium Deficiency Before Expected Investment Income		(26,072)
Expected Investment Income		67,250
Excess of Income over Costs		41,178

ILLUSTRATIVE INCOME STATEMENT

EXPECTED INVESTMENT INCOME EXCEEDS UNDERWRITING **LOSS**

	Year Ended December 31					Total
	1981	1982	1983	1984	1985	1981-1985
Premiums written	$350,000	$ -	$ -	$ -	$ -	$350,000
(Increase) decrease **in unearned** premiums	**(168,000)**	**168,000**	-	-	-	-
Premiums earned	**182,000**	**168,000**	-	-	-	350,000
Claims incurred	**161,200**	148,800	-	-	-	310,000
Amortization of policy acquisition costs	45,500	42,000	-	-	-	87,500
Other underwriting expenses	**18,081**	-	-	-	-	**18,081**
Maintenance costs	-	1,046	742	742	742	3,272
Provision for premium deficiency	-	-	-	-	-	-
	224,781	191,846	742	742	742	418,853
Income (loss) from **underwriting**	(42,781)	(23,846)	(742)	(742)	(742)	(68,853)
Investment income	8,555	17,672	18,846	20,113	10,619	75,805
Income (loss) from **operations**	$(34,226)	$ (6,174)	$ 18,104	$ 19,371	$ 9,877	$ 6,952